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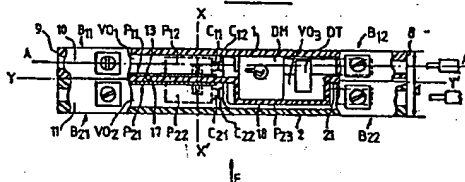
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(54) Disjoncteur à deux circuits de commutation dont l'un est protégé.

(57) Ce disjoncteur comprend, logés dans un boîtier isolant (1, 2), deux circuits de commutation comprenant deux interrupteurs respectifs ( $P_{12}$ ,  $C_{12}$  -  $P_{22}$ ,  $C_{22}$ ) actionnés, soit par un dispositif de déclenchement sur défaut de courant (DM, DT), soit par une commande manuelle. Le boîtier (1, 2) est divisé à l'intérieur par une cloison (13) qui s'étend d'une face latérale (8) à l'autre (9) et comprend une première portion plane (17) qui s'étend dans le plan médian de symétrie (YY'), et délimite deux volumes ( $VO_1$  et  $VO_2$ ) logeant respectivement les deux interrupteurs, et une deuxième portion plane (18) déportée, qui délimite d'un côté un espace de faible largeur par lequel passe une pièce conductrice ( $P_{23}$ ) connectée à l'interrupteur ( $P_{22}$ ,  $C_{22}$ ) et un troisième volume ( $VO_3$ ) logeant le dispositif de déclenchement sur défaut (DM, DT).

Ce disjoncteur se présente sous une forme modulaire de faibles dimensions.

**FIG. 2**





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⑤⑥ Documents cités:  
**FR-A- 2 485 254**

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Title: **EP0252786B1: Circuit breaker with two switching circuits, one of which is protected**[\[German\]](#)[\[French\]](#)

Derwent Title: Circuit breaker with dual switch circuit - uses moulded enclosure with internal wall shaped to separate contacts and house trip mechanism and internal conductors [\[Derwent Record\]](#)

Country: EP European Patent Office (EPO)

Kind: B1 Patent (See also: [EP0252786A1](#))

Inventor: Beurdeley, Dominique;

Assignee: **TELEMECANIQUE**  
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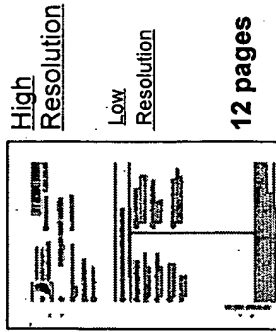
Published / Filed: 1991-09-11 / 1987-06-12

Application Number: EP1987000401321

IPC Code: H01H 71/00;

Priority Number: 1986-06- FR1986000008703

Abstract: [From equivalent [EP0252786A1](#)] This circuit breaker comprises, housed inside an insulating casing (1, 2), two switching circuits comprising two respective switches (P12, C12-P22, C22) actuated either by a device (DM, DT) for triggering on a malfunction in current, or by a manual control. The casing (1, 2) is divided inside by a partition (13) which extends from one side face (8) to the other (9) and comprises a first flat portion (17) which extends in the central plane of symmetry (YY'), and delimits two volumes (VO1 and VO2) housing the two switches respectively, and a second, offset, flat portion (18) which delimits, on one side, a space of small



width through which passes a conductive part (P23) connected to the switch (P22, C22) and a third volume (VO3) housing the device (DM, DT) which triggers on a malfunction. This circuit breaker comes in a modular form with small dimensions.

⚡ Attorney, Agent or Firm: **Marquer, Francis et al ;**

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Legal Status:

⚡ Designated

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⚡ Family:

PDF	Publication	Pub. Date	Filed	Title
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<input checked="" type="checkbox"/>	FR2600210A1	1987-12-18	1986-06-17	DISJONCTEUR A DEUX CIRCUITS DE COMMUTATION DONT L'UN EST
<input checked="" type="checkbox"/>	<b>EP0252786B1</b>	1991-09-11	1987-06-12	Circuit breaker with two switching circuits, one of which is protected
<input checked="" type="checkbox"/>	EP0252786A1	1988-01-13	1987-06-12	Circuit breaker with two switching circuits, one of which is protected
<input checked="" type="checkbox"/>	DE3772877C0	1991-10-17	1987-06-12	SCHALTER MIT ZWEI SCHALTKREISEN, WOVON EINER GESCHUETZT IST.
<input checked="" type="checkbox"/>	AT0067343E	1991-09-15	1987-06-12	SCHALTER MIT ZWEI SCHALTKREISEN, WOVON EINER GESCHUETZT IST.
6 family members shown above				

⚡ Description  
Expand description

**+ DISJONCTEUR A DEUX CIRCUITS DE COMMUTATION DONT L'UN EST PROTEGE.**

La présente invention concerne un disjoncteur du type comprenant, logés à l'intérieur d'un même boîtier isolant modulaire, deux circuits de commutation comprenant chacun un dispositif interrupteur à contacts fixe et mobile, ces deux circuits formant deux chemins de courant respectifs interruptibles grâce à un dispositif de déclenchement commandé :

- soit par au moins un organe de déclenchement automatique sur défaut, par exemple magnétique et/ou thermique,
- soit par un organe de commande manuelle de déclenchement et de réarmement.

**First Claim:**

Show all claims 1. A circuit breaker, comprising, inside the same modular insulating case, two switching circuits, namely : a protected switching circuit and a non-protected switching circuit, these two circuits each comprising a switching device with a fixed and a movable contact, these two circuits forming two respective current paths which can be interrupted by a controlled tripping device, either by at least an automatic tripping member operating on a current fault in one of the circuits, which comprises a magnetic tripping device (DM), or by a manually controlled tripping and resetting member, said case comprising, on the one hand, a first and a second front faces which are parallel to a median plane of symmetry and located at a short distance from each other and, on the other hand, orthogonal to said plane of symmetry, a securing face, a front face opposite the securing face which is equipped with a manual control member and a first and a second opposite side faces, each equipped with a couple of terminals situated at either side of said median plane of symmetry and respectively connected to the two switching circuits, said case being formed by a first and a second half-shells which are substantially symmetrical with respect to the median plane of symmetry and each contain the two terminals of the same switching circuit, the internal volume of the case being divided by a wall (13), made from an electrically insulating material which extends from the first (9) to the second (8) side face, said dividing wall (13) delimiting two breaking chambers, respectively containing the contacts of the protected switching circuit and those of the nonprotected switching circuit and, in a region facing the front face (5) of the case, a free volume which is not divided by the wall and which encloses, at least partially, the said tripping device and its mechanical connections with the automatic fault tripping member and the tripping and resetting control member ((M), characterized in that said dividing wall (13) comprises :

- a first flat portion (17), connected to the first side face (9) of the case and which extends in the median plane of symmetry (YY'), while delimiting with the first half-shell (10) a first volume (VO<sub>1</sub>) housing the switching device (P<sub>11</sub>, C<sub>11</sub>, C<sub>12</sub>) of the first switching circuit and, with the second half-shell (11), a second volume (VO<sub>2</sub>) which is symmetrical to the first one and houses the switching device (P<sub>22</sub>, C<sub>21</sub>, C<sub>22</sub>) of the second

switching circuit, said switching devices being respectively connected to the two terminals ( $B_{11}$  and  $B_{21}$ ) equipping the first side face (9) of the case ;

- a second flat portion (18) substantially offset with respect to said median plane (YY') towards the side of the front face (2) of the second half-shell (11) and connected to the first portion by a first stepped connection (19), said second portion (18) extending parallel to the front face (2) of the second half-shell (11), while delimiting therewith an interposed space through which passes a flat conducting piece ( $P_{23}$ ) for the electric connection between the switching device and the corresponding terminal ( $B_{12}$ ) of the second switching circuit provided on the second side face (8) of the case, the width of said interposed space corresponding to the thickness of said flat conducting piece ( $P_{23}$ ), said second portion (18) further delimiting with the front face (1) of the first half-shell (10) a third volume ( $VO_3$ ) which houses the coil of the magnetic tripping device (DM), connected, on the one hand to the fixed contact ( $C_{12}$ ) of the switching device ( $P_{12}$ ,  $C_{11}$ ,  $C_{12}$ ) and, on the other hand, to the terminal ( $B_{12}$ ) which is provided on the second side face of the first switching circuit.

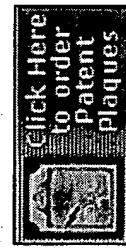
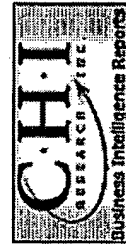
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<input checked="" type="checkbox"/>	DE10060521A1	2002-06-20	Becker, Joachim, Dipl.-Ing.	ABB Patent GmbH	Leitungsschutzschalter mit einer Pol- und Nullleitertrennstelle

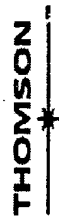
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Circuit breaker with two switching circuits, one of which is protected (EP0252786B1)



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